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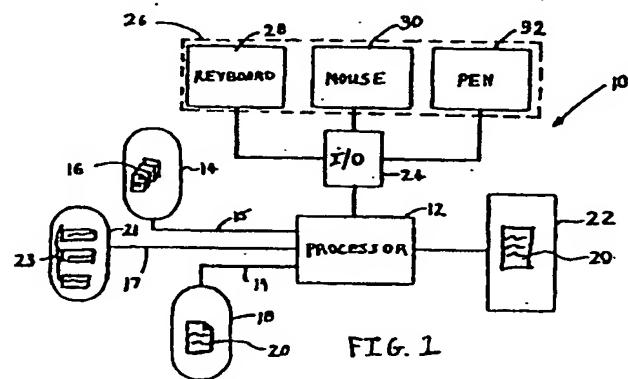
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(54) A method and apparatus for displaying references to a user's document browsing history within the context of a new document

(57) An electronic document reader supplements a new document with selectable links that reference portions of previously read documents that have content similar to a passage of the new document. The portions of the previously read documents may be previously identified and stored in a memory to expedite processing. The portions of previously read documents are identified by annotations or explicitly by a user. The identified portions are indexed, clustered and are used as proxies for topics. This invention segments a new document into

passages and matches the passages to the stored topics based on the similarity of the content. The topics that exceed a content similarity threshold cause corresponding selectable links to be displayed in the display of the new document near the corresponding passage. The user of this invention can then choose to follow the selectable link to learn more about the topic of the corresponding segment. In this manner, this invention aids a reader in connecting material in the new document with material in previously read documents.



EP 0950 964 A3



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC6)
X	AGOSTI M ET AL: "On the use of information retrieval techniques for the automatic construction of hypertext" INFORMATION PROCESSING & MANAGEMENT (INCORPORATING INFORMATION TECHNOLOGY), vol. 33, no. 2, 1 March 1997 (1997-03-01), page 133-144 XP004091791 ISSN: 0306-4573 * the whole document *	1-10	G06F17/30
X	BODNER, R., CIGNELL, M., TAM, J.: "Website Authoring using Dynamic Hypertext" ASSOCIATION FOR THE ADVANCEMENT OF COMPUTING IN EDUCATION: PROCEEDINGS OF WEBNET'97, November 1997 (1997-11), pages 59-64, XP002116560 Toronto * the whole document *	1,2,5-7,10	
A	GOLOVCHINSKY G: "What the query told the link: the integration of hypertext and information retrieval" EIGHTH ACM CONFERENCE ON HYPERTEXT, HYPERTEXT '97, PROCEEDINGS OF THE EIGHTH ACM INTERNATIONAL HYPERTEXT CONFERENCE, SOUTHAMPTON, UK, 6-11 APRIL 1997, pages 67-74, XP002116578 1997, New York, NY, USA, ACM, USA ISBN: 0-89791-866-5 * page 69, column 2, line 51 - page 70, column 2, line 33 *	3,4,8,9	
A		1-10	TECHNICAL FIELDS SEARCHED (IPC6) G06F
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	27 September 1999	Abbing, R	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons S : member of the same patent family, corresponding document	
X : particularly relevant & taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			



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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 2862

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CLS)
A	<p>"AUTOMATIC HYPERMEDIA LINK GENERATION" IBM TECHNICAL DISCLOSURE BULLETIN, vol. 35, no. 1A, 1 June 1992 (1992-06-01), pages 447-448, XP000308936 ISSN: 0018-8689 * the whole document *</p>	1-10	
A	<p>EP 0 809 197 A (MATSUSHITA ELECTRIC IND CO LTD) 26 November 1997 (1997-11-26) * abstract * * column 12, line 11 - column 12, line 46 * * column 30, line 1 - column 31, line 24 *</p>	1-10	
A	<p>CHANG D T: "HiNet: a user-centered approach for automatic link generation" FIFTH ACM CONFERENCE ON HYPertext PROCEEDINGS, PROCEEDINGS OF HYPertext '93, SEATTLE, WA, USA, 14-18 NOV. 1993, pages 145-158, XP002116595 1993, New York, NY, USA, ACM, USA ISBN: 0-89791-624-7 * table 1 * * figure 5 *</p>	1,4	
			TECHNICAL FIELDS SEARCHED (Int.CLS)
<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	27 September 1999	Abbing, R	
CATEGORY OF CITED DOCUMENTS		<p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>	
<p>X : particularly relevant & taken alone Y : particularly relevant & combined with another Z : document of the same category A : technological background O : non-written disclosure P : intermediate document</p>			

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 99 30 2862

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-09-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0809197 A	26-11-1997	JP 9311870 A	02-12-1997
		CN 1170908 A	21-01-1998
		US 5848407 A	08-12-1998

For more details about this annex : see Official Journal of the European Patent Office, No. 12/92